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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,468	10/22/2001	Lorinda R. Opsahl-Ong	G04.006	9753
28062	7590	07/14/2006	EXAMINER	
BUCKLEY, MASCHOFF, TALWALKAR LLC			HARBECK, TIMOTHY M	
5 ELM STREET			ART UNIT	PAPER NUMBER
NEW CANAAN, CT 06840			3628	

DATE MAILED: 07/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/045,468

Applicant(s)

OPSAHL-ONG, LORINDA R.

Examiner

Timothy M. Harbeck

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>08/29/2002</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 12-31, 33 and 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foster et al (hereinafter Foster, US 2004/0073508 A1) in view of Tash (Carl Tash. "Tenant Demand Drives Value in Today's Market." National Real Estate Investor. Atlanta: Oct 1993. Vol. 35, Iss. 11; pg 230, 2 pgs.)

**Re Claim 1:** Foster discloses a method of evaluating a property comprising:

- Determining a first stochastic value associated with a property (Page 1, paragraph 0005-0006)
- Determining a second stochastic value associated with the property (page 1, paragraph 0005-0006)

Foster does not explicitly disclose the steps comprising:

- Wherein the second stochastic value being associated with vacancy information and;
- Predicting Income associated with the property based on the first and second stochastic value

Tash discloses that valuations of income producing real estate have been determined by some combination of recent cash flows and projected cash flows and

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that furthermore vacancy information, while ignored in the past, is perhaps the most important component that drives value for these properties (See Abstract). Therefore it would have been obvious to a person of ordinary skill in the art at the time of invention to modify Foster to include vacancy information as a particular stochastic variable in order to get a more accurate prediction of the value of income producing real estate. In including vacancy information to the valuation process an investor can further deduce which properties represent potential value investments and which properties should be ignored.

**Re Claim 2:** Foster in view of Tash discloses the claimed method supra but the references do not explicitly disclose wherein said determinations of the first and second stochastic values are repeated, and said predicting is performed in accordance with a Monte Carlo simulation to determine an income distribution. However it was notoriously well known in the art at the time of invention to utilize a Monte Carlo simulation when using random (stochastic) numbers to determine events. In the Monte Carlo method a random number generator is used to calculate the probability of a particular event in order to gain a perspective on a distribution of the possible events. Therefore it would have been obvious to a person of ordinary skill in the art to utilize a Monte Carlo simulation to the method of Foster in view of Tash in order to estimate the probabilities of the future income distribution of the properties. This will further assist in evaluating the property, as it will show the best, worst and most likely future cash flows from the property (Also see Foster paragraph 0043 "model alternative scenarios...based upon a variety of assumptions.").

**Re Claim 3:** Foster in view of Tash discloses the claimed method supra but does not explicitly disclose wherein the first stochastic value is associated with an interest rate yield curve. However both references note that actual and future cash flows are utilized to predict the value of income producing real estate (Abstract of Tash; Paragraph 0006 of Foster). Furthermore, the interest rate yield of an investment is notoriously well known as a cash flow utilized in investment valuation. Therefore it would have been obvious to modify Foster in view of Tash to include this step in order to value the property based on a widely utilized cash flow value that is important to investors.

**Re Claim 12:** Foster in view of Tash discloses the claimed method supra and Foster further discloses wherein said predicting is performed for a plurality of properties (Page 7, paragraph 0078 “valuing a new property.”)

**Re Claim 13:** Foster in view of Tash discloses the claimed method supra but the references do not explicitly disclose wherein a cross-correlation matrix is utilized for the stochastic variables. However cross-correlation matrixes were notoriously well known in the art at the time of invention. It would have been obvious to anyone of ordinary skill in the art at the time of invention to include this feature to the disclosure of Foster in view of Tash so that a user can see the degree to which the variables are related.

**Re Claim 14:** Foster in view of Tash discloses the claimed method supra and Foster further discloses wherein said predicting is performed for each of the plurality of properties based on the first and second stochastic values (Page 7, paragraph 0078 “valuing a new property.”)

**Re Claim 15:** Foster in view of Tash discloses the claimed method supra and Tash further discloses wherein said predicting is performed for a property having a plurality of units (Page 2, 4<sup>th</sup> full paragraph “multi-tenant office buildings.”)

**Re Claim 16:** Foster in view of Tash discloses the claimed method supra and Tash further discloses wherein said predicting is performed for a variety of time periods (Abstract “10 to 20 year analysis”)

**Re Claim 17:** Foster in view of Tash discloses the claimed method supra and Foster further discloses wherein said predicting comprises predicting net operating income (Paragraph 0006)

**Re Claim 18:** Foster in view of Tash discloses the claimed method supra and Foster further discloses predicting the value of the property investment based on N years of discounted operating income returns (paragraph 0006 “projected cash flows” inherently discounted;) and the value of a sale in year N using a stochastic cap rate (paragraph 0006 and 0066).

**Re Claim 19:** Foster in view of Tash discloses the claimed method supra and Foster further discloses wherein said predicting comprises calculating debt service coverage ratio information (paragraph 0006; “calculate principal and interest payments over the term of a fixed loan.”)

**Re Claim 20:** Foster in view of Tash discloses the claimed method supra and Foster further discloses wherein the debt service coverage ration information is calculated based on net operating income information, operating expense information,

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management fee information and debt service information (paragraphs 0006, 0070, and 0106)

**Re Claim 21 and 22:** Foster in view of Tash discloses the claimed method supra and but does not explicitly disclosing evaluating a loan based on the debt service coverage ratio and comparing the debt service ratio information with a pre-determined value. However it was well known in the art at the time of invention that the purpose of running an evaluation is to compare the results of the evaluation with one's requirements. Therefore it would have been obvious to a person of ordinary skill in the art to utilize the results of a test model to evaluate the loan in order to determine the acceptability and/or the affordability of the investment.

**Re Claim 23:** Foster in view of Tash discloses the claimed method supra and Foster further discloses adjusting a potential loan parameter based on said evaluation (paragraph 0078 "modify and existing property evaluation.")

**Re Claim 24:** Foster in view of Tash discloses the claimed method supra but does not explicitly disclose predicting a loan workout result. However it was well known in the art at the time of invention to factor in a potential default into a prediction since there is always at least a small risk associated with this situation. Therefore it would have been obvious to a person of ordinary skill to include this step to the disclosure of Foster in view of Tash so that the risk of default is factored into the valuation as well as any remedial measures that will be undertaken should this happen.

**Re Claim 25:** Foster in view of Tash discloses the claimed method supra but does not explicitly disclose wherein said predicting is based on at least one of: (i) a

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borrower deferred tax liability, (ii) a borrower litigation, (iii) a loan amount, (iv) a borrower worth, (v) other borrower loans, (vi) loan to value information, (vii) borrower equity, and (viii) borrower capital. However these are all well-known factors of a borrowers ability to pay a loan, which would effect any prediction as to a loan workout. Therefore it would have been obvious to a person of ordinary skill in the art at the time of invention to include these steps to the disclosure of Foster in view of Tash so that all potential risk associated with a particular borrower have been factored into the evaluation.

**Re Claim 26:** Foster in view of Tash discloses the claimed method supra and while not explicitly disclosing wherein said predicting is based on a stochastic forecast, the fact that the variables in question are random, it would be inherent that the predicting would be a stochastic forecast. A prediction by its very nature is conjecture or stochastic.

**Re Claim 27:** Foster in view of Tash discloses the claimed method supra but does not explicitly disclose wherein the loan workout result is associated with a predicted loss amount. However it is well known in the art that the overall loss amount from a defaulted loan is a major risk factor in determining value. Therefore it would have been obvious to a person of ordinary skill in the art at the time of invention to include these steps to the disclosure of Foster in view of Tash so that all potential risk associated with a potential transaction or investment have been factored into the evaluation.



**Re Claim 28-30:** Foster in view of Tash discloses the claimed method supra and further discloses calculating loan to value information and evaluating a potential loan based on the loan to value information wherein said evaluating comprises comparing the loan to value information with a pre-determined value (Paragraphs 0105-0107).

**Re Claim 31:** Foster in view of Tash discloses the claimed method supra and Foster further discloses adjusting a potential loan parameter based on said evaluation (paragraph 0078 "modify an existing property evaluation.")

**Re Claim 33 and 35:** Further apparatus and medium claims would have been obvious in order to implement the previously rejected method claim 1, and is therefore rejected using the same art and rationale.

**Re Claim 36:** Foster discloses a method of evaluating a property comprising:

- Determining a stochastic value associated with the property (Page 1, paragraph 0005-0006)

Foster does not explicitly disclose the steps comprising:

- Wherein the stochastic value being associated with vacancy information and;
- Predicting Income associated with the property based on the stochastic vacancy value

Tash discloses that valuations of income producing real estate have been determined by some combination of recent cash flows and projected cash flows and that furthermore vacancy information, while ignored in the past, is perhaps the most important component that drives value for these properties (See Abstract). Therefore it

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would have been obvious to a person of ordinary skill in the art at the time of invention to modify Foster to include vacancy information as a particular stochastic variable in order to get a more accurate prediction of the value of income producing real estate. In including vacancy information to the valuation process an investor can further deduce which properties represent potential value investments and which properties should be ignored.

Claims 4-11, 32 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foster in view of Tash in view of Florance (US 6,871,140 B1).

**Re Claim 4:** Foster in view of Tash discloses the claimed method supra but does not explicitly disclose wherein the first stochastic value is associated with a market rent forecast. Florance discloses a method for collection, distribution and use of information in connection with commercial real estate including a variety of databases containing said information, including market rent information (Column 18, lines 48-51). It would have been obvious to a person of ordinary skill in the art at the time of invention to modify Foster in view of Tash to include this database in order to have access to even more information from which to make a valuation on a potential investment property. Foster utilizes "multiple databases to obtain comparables data related to a property of interest for use in calculations (Abstract)." By including the extensive Florance database a user of Foster would have even more information from which to make a proper decision about a potential investment.

**Re Claim 5:** Foster in view of Tash in view of Florance discloses the claimed method supra but does not explicitly disclose wherein the first stochastic value is further associated with a market rent volatility model. However it was notoriously well known in the art at the time of invention to use volatility data in valuations in order to make a more accurate prediction. This is done to counter any effects of rapid fluctuations between measuring periods. Therefore it would have been obvious to a person of ordinary skill in the art to view any market volatility data when making a valuation in case so that an erroneous estimate is not used because of a particular data point that is not indicative of the normal behavior.

**Re Claim 6:** Foster in view of Tash in view of Florance discloses the claimed method and Florance further discloses wherein the first stochastic value is associated with at least one of (i) property expense information, (ii) capitalization rate information and (iii) lease term information (Column 41 line 23).

**Re Claim 7:** Foster in view of Tash in view of Florance discloses the claimed method and Florance further discloses wherein the second stochastic value comprises vacancy time information (Column 50 lines 20-32)

**Re Claim 8:** Foster in view of Tash in view of Florance discloses the claimed method and Florance further discloses wherein the vacancy time information comprises a vacancy time distribution (Column 50 lines 20-32; distribution over 12 months).

**Re Claim 9:** Foster in view of Tash in view of Florance discloses the claimed method and Florance further discloses wherein the vacancy time information is based

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on at least one of: (i) market demand information, (ii) market vacancy information, and (iii) market supply information (Column 41, lines 24-25; market vacancy information).

**Re Claim 10:** Foster in view of Tash in view of Florance discloses the claimed method and Florance further discloses wherein the vacancy time information is associated with a tenet renewal prediction (Column 50 lines 20-32).

**Re Claim 11:** Foster in view of Tash in view of Florance discloses the claimed method and Florance further discloses wherein an evaluation is further based on at least one of (i) potential loan information (Column 49 line 56-58; many other of the values listed in Column 49 lines 47-Column 50 line 19).

**Re Claim 32:** Foster discloses a method of evaluating a property comprising:

- Determining a series of stochastic interest rate values associated with the property over a period of time (paragraph 0006 “cash flow calculation tools.” And 0066)
- Predicting debt service coverage ratio information associated with the property based on the stochastic values (paragraph 0006; “calculate principal and interest payments over the term of a fixed loan.”)

Foster does not explicitly disclose

- Determining a series of stochastic market rent values associated with the property over the period of time
- Determining a series of stochastic vacancy values associated with the property over the period of time

- Wherein said determinations of the stochastic values are repeated and said predicting is performed in accordance with a Monte Carlo simulation and;
- Evaluating a potential loan based on the debt service coverage ratio information

Tash discloses that valuations of income producing real estate have been determined by some combination of recent cash flows and projected cash flows and that furthermore vacancy information, while ignored in the past, is perhaps the most important component that drives value for these properties (See Abstract). Therefore it would have been obvious to a person of ordinary skill in the art at the time of invention to modify Foster to include vacancy information as a particular stochastic variable in order to get a more accurate prediction of the value of income producing real estate. In including vacancy information to the valuation process an investor can further deduce which properties represent potential value investments and which properties should be ignored.

Foster in view of Tash discloses the claimed method supra but does not explicitly disclose wherein the first stochastic value is associated with a market rent forecast. Florance discloses a method for collection, distribution and use of information in connection with commercial real estate including a variety of databases containing said information, including market rent information (Column 18, lines 48-51). It would have been obvious to a person of ordinary skill in the art at the time of invention to modify Foster in view of Tash to include this database in order to have access to even more

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information from which to make a valuation on a potential investment property. Foster utilizes "multiple databases to obtain comparables data related to a property of interest for use in calculations (Abstract)." By including the extensive Florance database a user of Foster would have even more information from which to make a proper decision about a potential investment.

The references do not explicitly disclose wherein said determinations of the stochastic values are repeated, and said predicting is performed in accordance with a Monte Carlo simulation to determine an income distribution. However it was notoriously well known in the art at the time of invention to utilize a Monte Carlo simulation when using random (stochastic) numbers to determine events. In the Monte Carlo method a random number generator is used to calculate the probability of a particular event in order to gain a perspective on a distribution of the possible events. Therefore it would have been obvious to a person of ordinary skill in the art to utilize a Monte Carlo simulation to the method of Foster in view of Tash in order to estimate the probabilities of the future income distribution of the properties. This will further assist in evaluating the property, as it will show the best, worst and most likely future cash flows from the property (Also see Foster paragraph 0043 "model alternative scenarios...based upon a variety of assumptions.")

The references do not explicitly disclose evaluating a loan based on the debt service coverage ratio. However it was well known in the art at the time of invention that the purpose of running an evaluation is to compare the results of the evaluation with one's requirements. Therefore it would have been obvious to a person of ordinary

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skill in the art to utilize the results of a test model to evaluate the loan in order to determine the acceptability and/or the affordability of the investment.

**Re Claim 34:** Florance in view of Tash discloses the claimed apparatus supra but does not explicitly disclose wherein said storage device further stores at least one of: (i) an interest rate information database, (ii) a market rate database, (iii) a vacancy database and (iv) an evaluation database.

Florance discloses a method for collection, distribution and use of information in connection with commercial real estate including a variety of databases containing said information, including market rent information (Column 18, lines 48-51). It would have been obvious to a person of ordinary skill in the art at the time of invention to modify Foster in view of Tash to include this database in order to have access to even more information from which to make a valuation on a potential investment property. Foster utilizes "multiple databases to obtain comparables data related to a property of interest for use in calculations (Abstract)." By including the extensive Florance database a user of Foster would have even more information from which to make a proper decision about a potential investment.

### ***Conclusion***

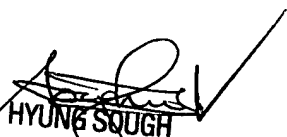
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy M. Harbeck whose telephone number is 571-272-8123. The examiner can normally be reached on M-F 8:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung S. Sough can be reached on 571-272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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